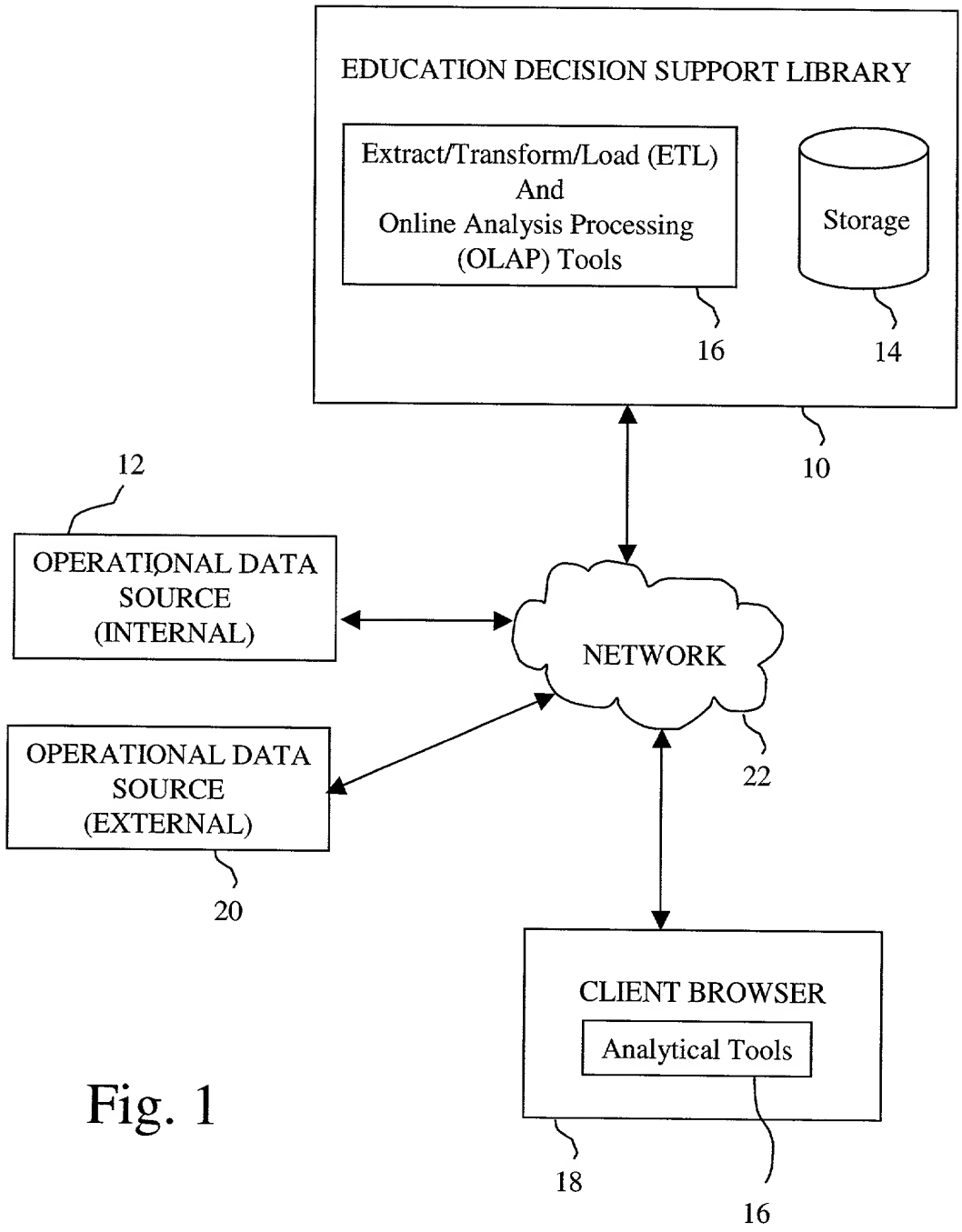

EDUCATION DECISION SUPPORT LIBRARY
Extract/Transform/Load (ETL)
And
Online Analysis Processing
(OLAP) Tools
Storage
16
14
10
12
OPERATIONAL DATA
SOURCE
(INTERNAL)
NETWORK
22
OPERATIONAL DATA
SOURCE
(EXTERNAL)
20
CLIENT BROWSER
Analytical Tools
18
16

Fig. 1

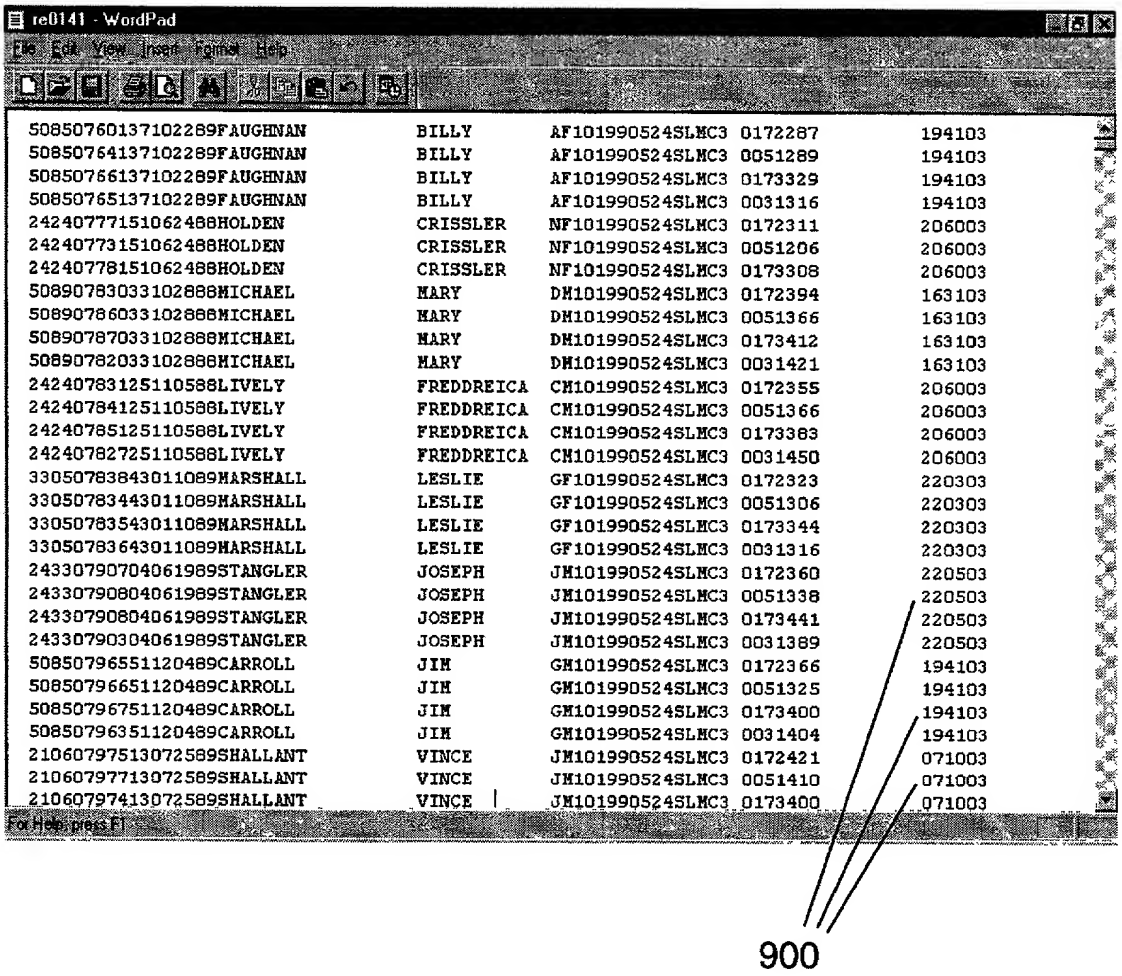
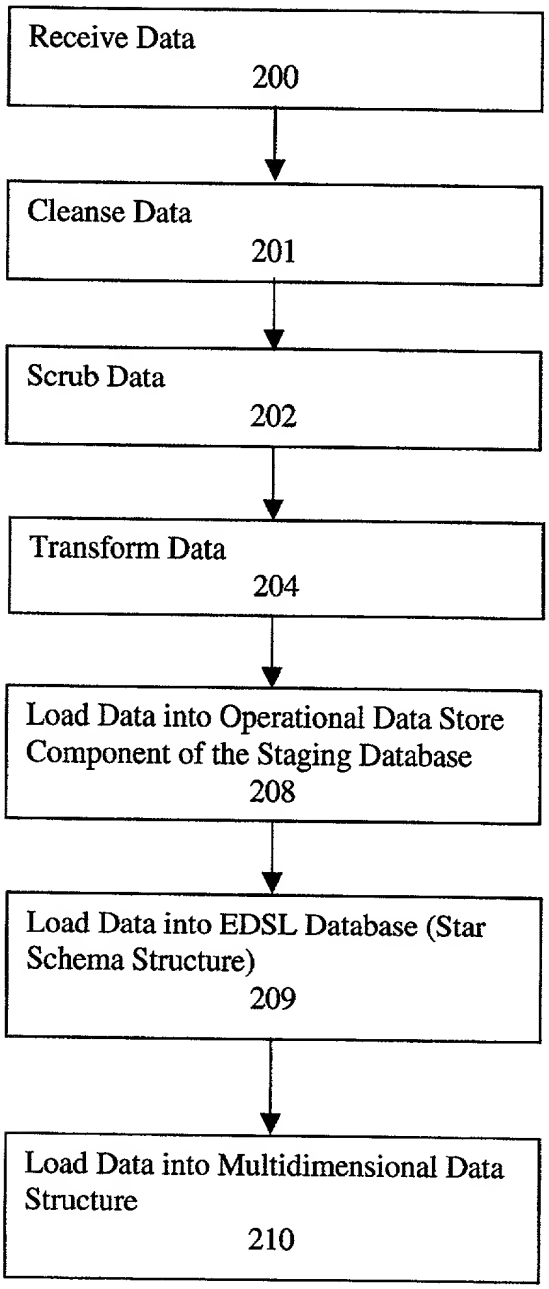

re0141 - WordPad
File Edit View Insert Format Help
508507601371022 89FAUGHNAN BILLY AF101990524SLMC3 0172287 194103
508507641371022 89FAUGHNAN BILLY AF101990524SLMC3 0051289 194103
508507661371022 89FAUGHNAN BILLY AF101990524SLMC3 0173329 194103
508507651371022 89FAUGHNAN BILLY AF101990524SLMC3 0031316 194103
242407771510624 88HOLDEN CRISSLER NF101990524SLMC3 0172311 206003
242407731510624 88HOLDEN CRISSLER NF101990524SLMC3 0051206 206003
242407781510624 88HOLDEN CRISSLER NF101990524SLMC3 0173308 206003
508907830331028 88MICHAEL MARY DM101990524SLMC3 0172394 163103
508907860331028 88MICHAEL MARY DM101990524SLMC3 0051366 163103
508907870331028 88MICHAEL MARY DM101990524SLMC3 0173412 163103
508907820331028 88MICHAEL MARY DM101990524SLMC3 0031421 163103
242407831251105 88LIVELY FREDDREICA CM101990524SLMC3 0172355 206003
242407841251105 88LIVELY FREDDREICA CM101990524SLMC3 0051366 206003
242407851251105 88LIVELY FREDDREICA CM101990524SLMC3 0173383 206003
242407827251105 88LIVELY FREDDREICA CM101990524SLMC3 0031450 206003
330507838430110 89MARSHALL LESLIE GF101990524SLMC3 0172323 220303
330507834430110 89MARSHALL LESLIE GF101990524SLMC3 0051306 220303
330507835430110 89MARSHALL LESLIE GF101990524SLMC3 0173344 220303
330507836430110 89MARSHALL LESLIE GF101990524SLMC3 0031316 220303
243307907040619 89STANGLER JOSEPH JM101990524SLMC3 0172360 220503
243307908040619 89STANGLER JOSEPH JM101990524SLMC3 0051338 220503
243307908040619 89STANGLER JOSEPH JM101990524SLMC3 0173441 220503
243307903040619 89STANGLER JOSEPH JM101990524SLMC3 0031389 220503
508507965511204 89CARROLL JIM GM101990524SLMC3 0172366 194103
508507966511204 89CARROLL JIM GM101990524SLMC3 0051325 194103
508507967511204 89CARROLL JIM GM101990524SLMC3 0173400 194103
508507963511204 89CARROLL JIM GM101990524SLMC3 0031404 194103
210607975130725 89SHALLANT VINCE JM101990524SLMC3 0172421 071003
210607977130725 89SHALLANT VINCE JM101990524SLMC3 0051410 071003
210607974130725 89SHALLANT VINCE JM101990524SLMC3 0173400 071003
For Help, press F1
900

Fig. 2

Fig. 3



Patent - 6,996,556

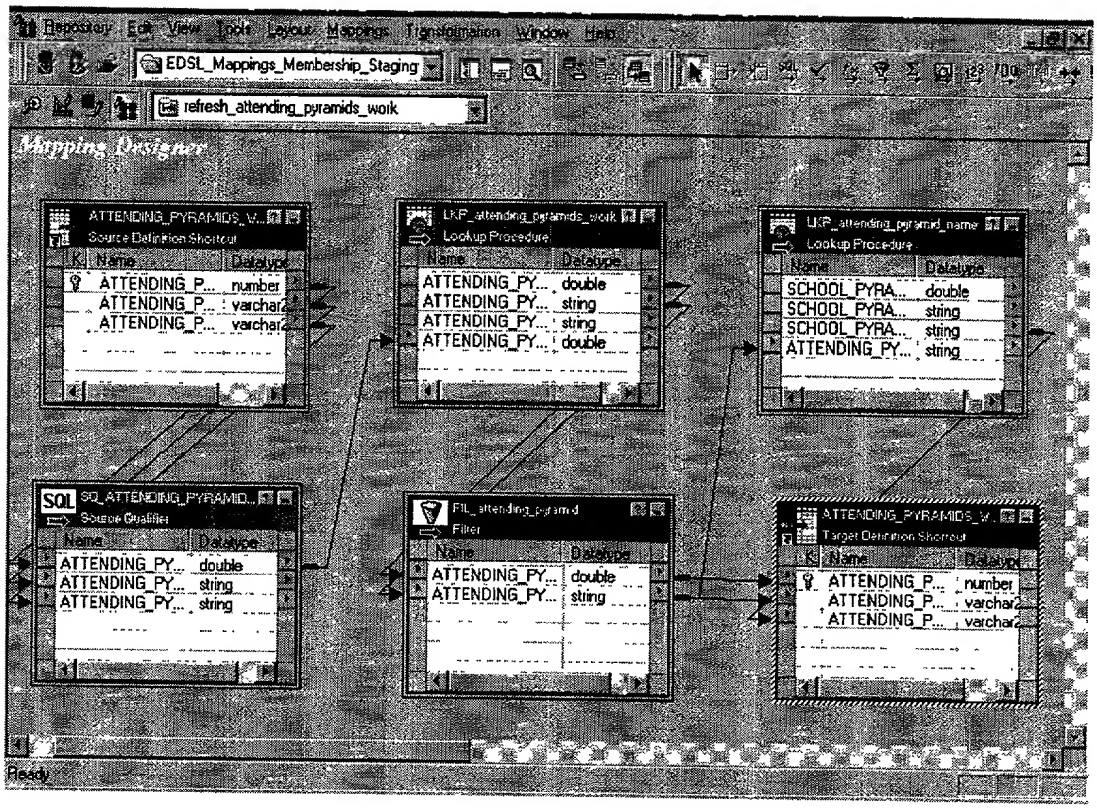


Fig. 4

09909560 - 070504

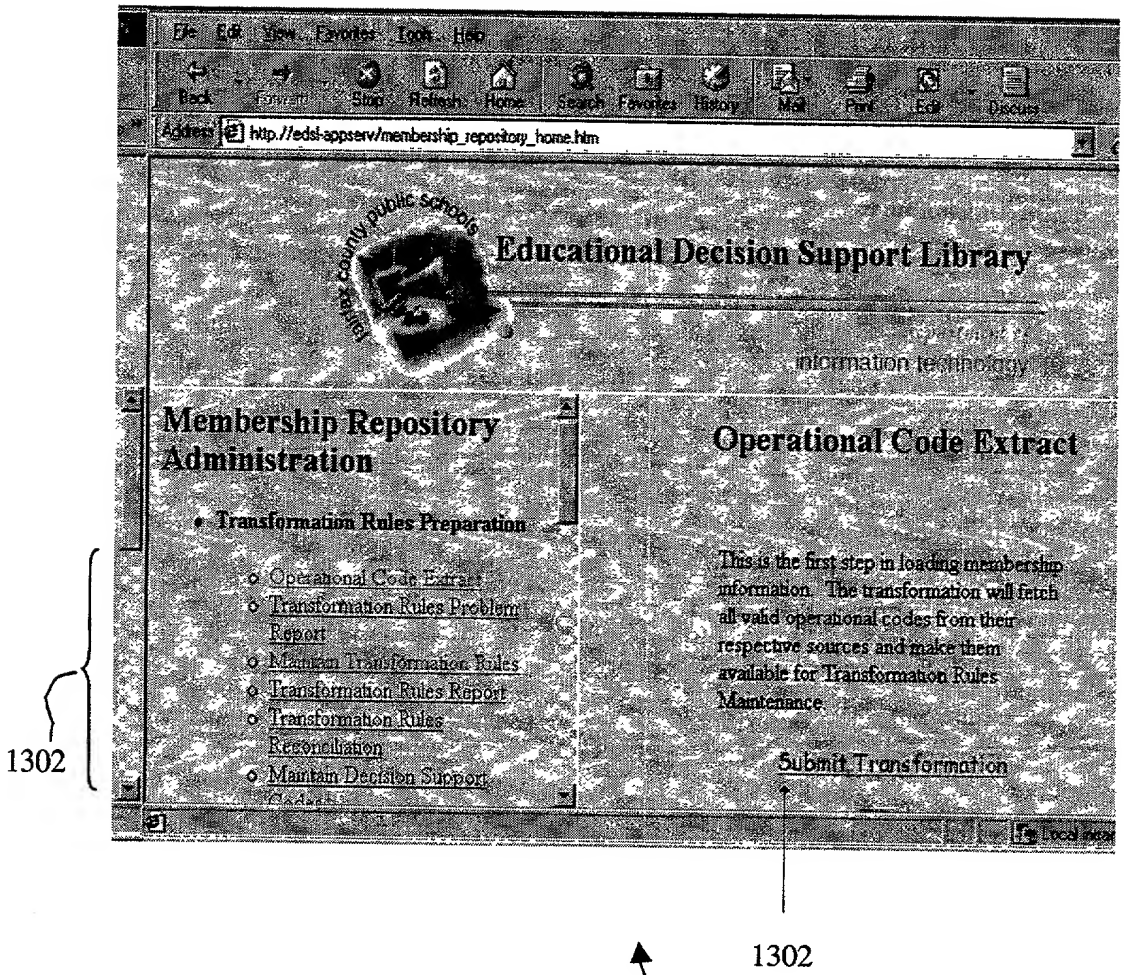

File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss
Address http://edsl-appserv/membership_repository_home.htm
Educational Decision Support Library
information technology
Membership Repository Administration
Transformation Rules Preparation
Operational Code Extract
Transformation Rules Problem Report
Maintain Transformation Rules
Transformation Rules Report
Transformation Rules Reconciliation
Maintain Decision Support
Operational Code Extract
This is the first step in loading membership information. The transformation will fetch all valid operational codes from their respective sources and make them available for Transformation Rules Maintenance.
Submit Transformation
1302
1302
1300

Fig. 5

Name	Type	Null?
SCHOOL_ID	VARCHAR2(4)	
STUDENT_ID	VARCHAR2(10)	
BIRTH_DATE_INPUT	VARCHAR2(6)	
STUDENT_LAST_NAME	VARCHAR2(60)	
STUDENT_FIRST_NAME	VARCHAR2(60)	
STUDENT_MIDDLE_INITIAL	VARCHAR2(1)	
GENDER_CODE	VARCHAR2(4)	
ETHNICITY_CODE	VARCHAR2(4)	
PRIMARY_LANGUAGE_CODE	VARCHAR2(4)	
TEST_DATE	VARCHAR2(6)	
TEST_ID	VARCHAR2(8)	
TEST_PART_ID	VARCHAR2(4)	
SCALE_SCORE_1	NUMBER(3)	
SCALE_SCORE_2	NUMBER(3)	
SCALE_SCORE_3	NUMBER(3)	
SCALE_SCORE_4	NUMBER(3)	
VDOE_SCHOOL_ID	VARCHAR2(4)	
GRADE_LEVEL_CODE	VARCHAR2(4)	
SOL_STUDENT_INPUT_KEY		NOT NULL NUMBER

Figure 6

P05300 - 05305

Name	Type	Null?
SOL_STUDENT_SCORE_KEY		NOT NULL NUMBER
CLUSTER_KEY	NUMBER	
SCHOOL_YEARS_KEY	NUMBER	
STUDENTS_KEY	NUMBER	
REGISTRATIONS_KEY	NUMBER	
STUDENTS_REPORTING_KEY		NOT NULL NUMBER
SCHOOLS_KEY	NUMBER	
LANGUAGES_KEY		NOT NULL NUMBER
ATTENDING_PYRAMIDS_KEY	NUMBER	
POPULATIONS_ KEY		NOT NULL NUMBER
GEO_SCHOOL_PYRAMIDS_KEY	NUMBER	
SOCIO_ECONOMICS_KEY		NOT NULL NUMBER
SCHOOLS_REPORTING_KEY		NOT NULL NUMBER
HOME_LOCATIONS_KEY		NOT NULL NUMBER
VDOE_REGIONS_KEY		NOT NULL NUMBER
GRADE_LEVELS_KEY		NOT NULL NUMBER
SCHOOL_PYRAMIDS_KEY		NOT NULL NUMBER
GEOGRAPHIC_AREAS_KEY		NOT NULL NUMBER
REPORTING_AREAS_KEY		NOT NULL NUMBER
TEST_ADMINISTRATIONS_KEY		NOT NULL NUMBER
STANDARDIZED_TESTS_KEY		NOT NULL NUMBER
AUDIT_TRAILS_KEY		NOT NULL NUMBER
TEST_SCORE_NBR		NOT NULL NUMBER
ADMIN_SCHOOLS_REPORTING_KEY		NOT NULL NUMBER
PROFICIENCY_LEVEL_CODE		NOT NULL NUMBER
COUNT		NOT NULL NUMBER

Figure 7

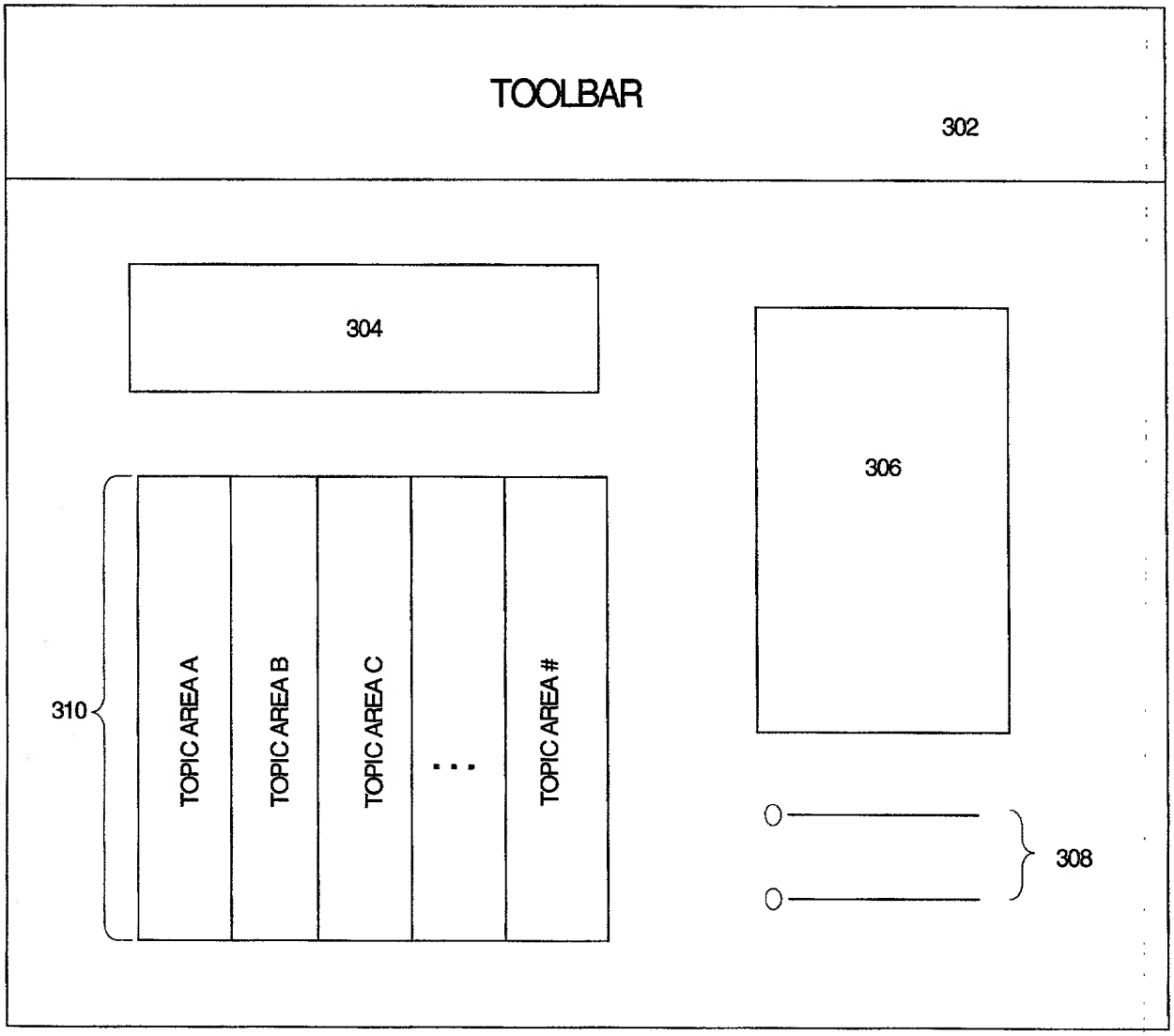

TOOLBAR
302
304
306
300
310
TOPIC AREA A
TOPIC AREA B
TOPIC AREA C
TOPIC AREA #
308

Figure 8

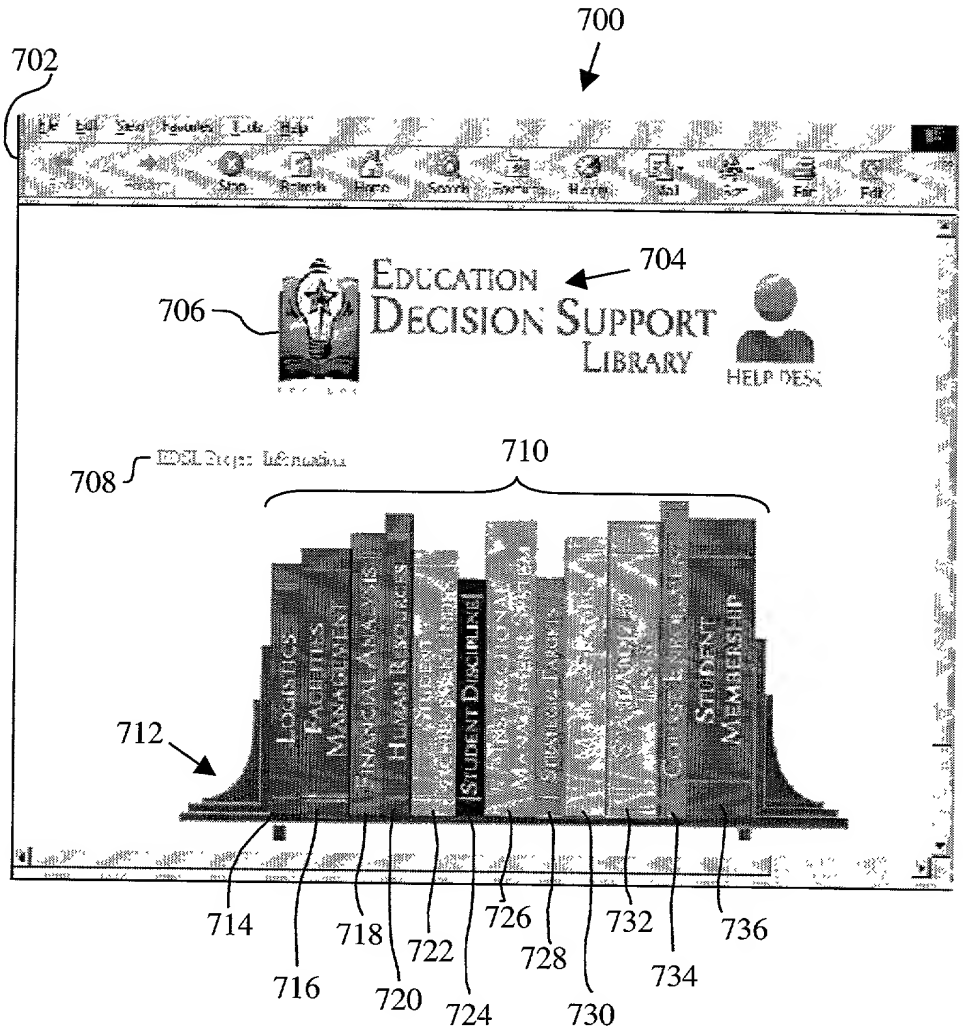

700
702
704
706
EDUCATION
DECISION SUPPORT
LIBRARY
HELP DESK
708
710
712
STUDENT DISCIPLINE
714
716
718
720
722
724
726
728
730
732
734
736

Fig. 9

***Volume Deployment (Alphabetical)**

Advanced Placement Test (AP)
Approved Instructional Materials
Elementary Academic Records
Facilities Management
Family and Early Childhood Education Program (FECEP)/Head
Financial Analysis
Grade Point Average (GPA)
Graduation Information
High Schools: Course Enrollment and Marks
Human Resources
Human Resources (Staffing)
Instructional Management Systems
International Baccalaureate Test (IB)
Logistics
Math/Science Completers
Middle Schools: Course Enrollment and marks
Otis-Lennon School Ability Test
Professional Technical Studies Completers
Resource Teachers
SAT Test Results
School wide Achievement Index
Service Program Enrollment
Special Education
Standardized Tests
Start Report/Child Plus Database
Student Discipline
Student Membership
Summer School
Test: Standards of Learning (SOL)
Tests: Stanford 9
Virginia Literacy Passport Test (VLT)
*Additional Volumes to be identified as operational data becomes available

Fig. 10

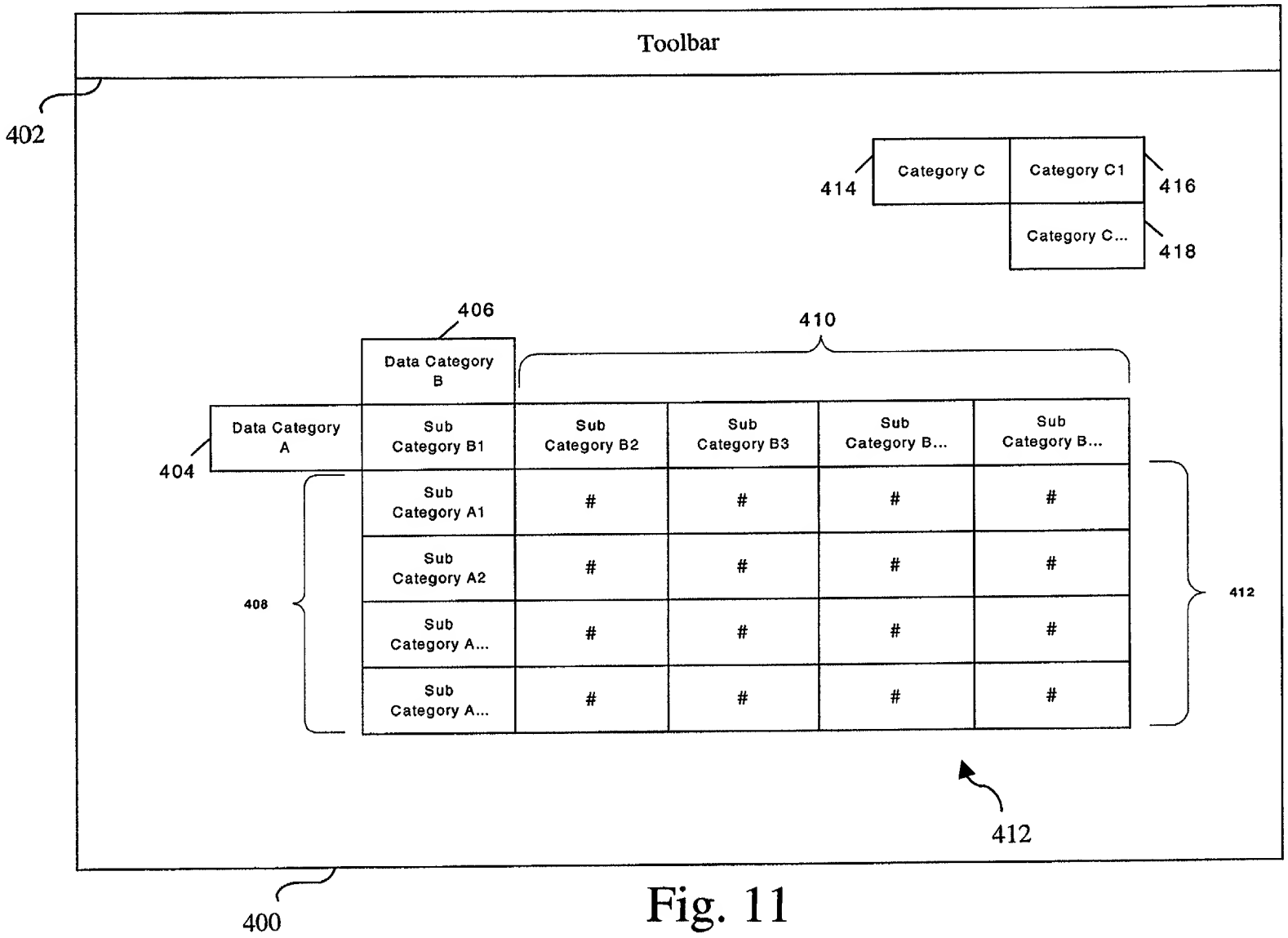

Toolbar
402
414
Category C
Category C1
416
Category C...
418
406
410
Data Category B
Data Category A
404
Sub Category B1
Sub Category B2
Sub Category B3
Sub Category B...
Sub Category B...
Sub Category A1
Sub Category A2
Sub Category A...
Sub Category A...
#
408
412
412
400

Fig. 11

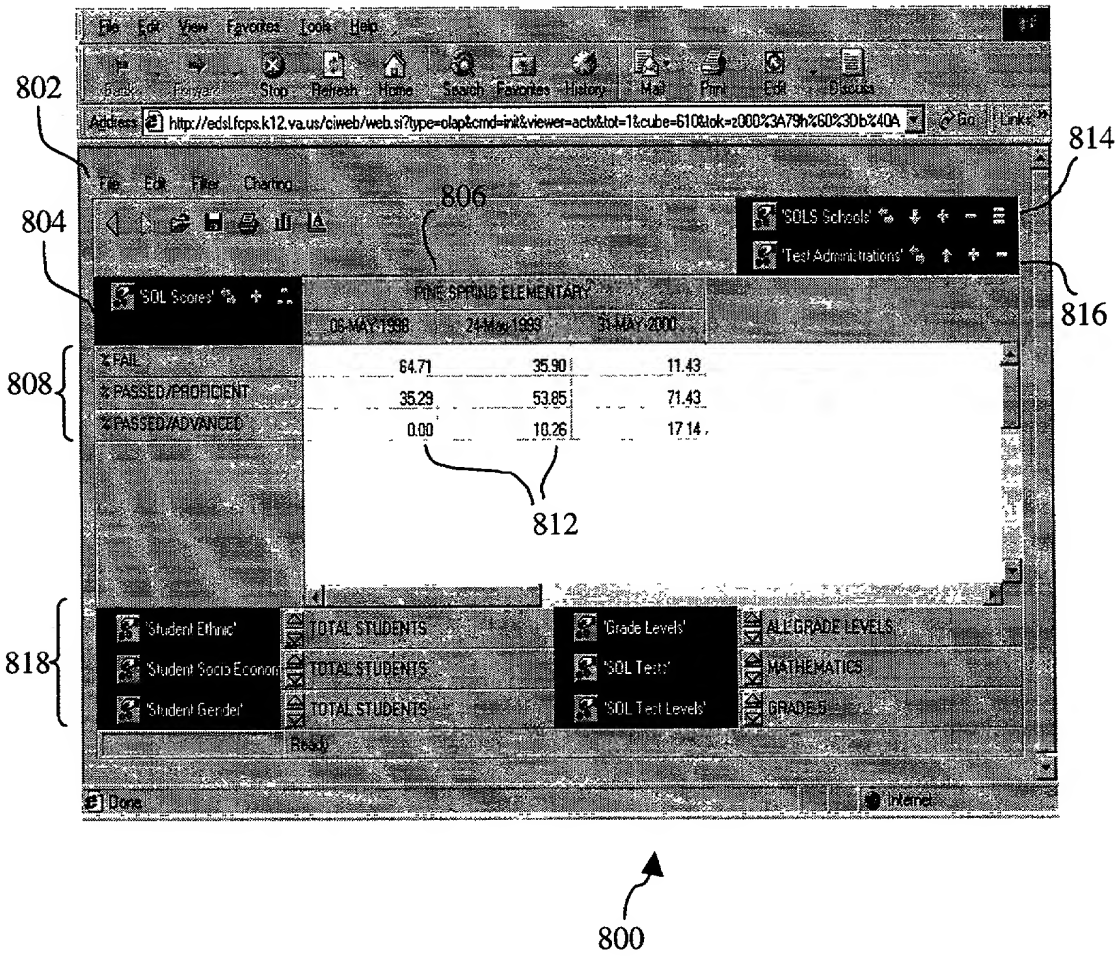

802
804
806
808
812
814
816
818
800
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss
Address http://edsl.fcps.k12.va.us/ciweb/web.si?type=olap&cmd=init&viewer=activ&tot=1&cube=610&tok=z000%3A79h%60%3Db%40A
Go Links
File Edit Filter Charting
'SOLS Schools'
'Test Administrations'
'SOL Scores'
PINE SPRING ELEMENTARY
05-MAY-1998
24-May-1999
31-MAY-2000
%FAIL 64.71 35.90 11.43
%PASSED/PROFICIENT 35.29 53.85 71.43
%PASSED/ADVANCED 0.00 10.26 17.14
'Student Ethnic'
'Student Socio Econon'
'Student Gender'
TOTAL STUDENTS
TOTAL STUDENTS
TOTAL STUDENTS
'Grade Levels'
'SOL Tests'
'SOL Test Levels'
ALL GRADE LEVELS
MATHEMATICS
GRADES
Ready
Done
Internet

Fig. 12

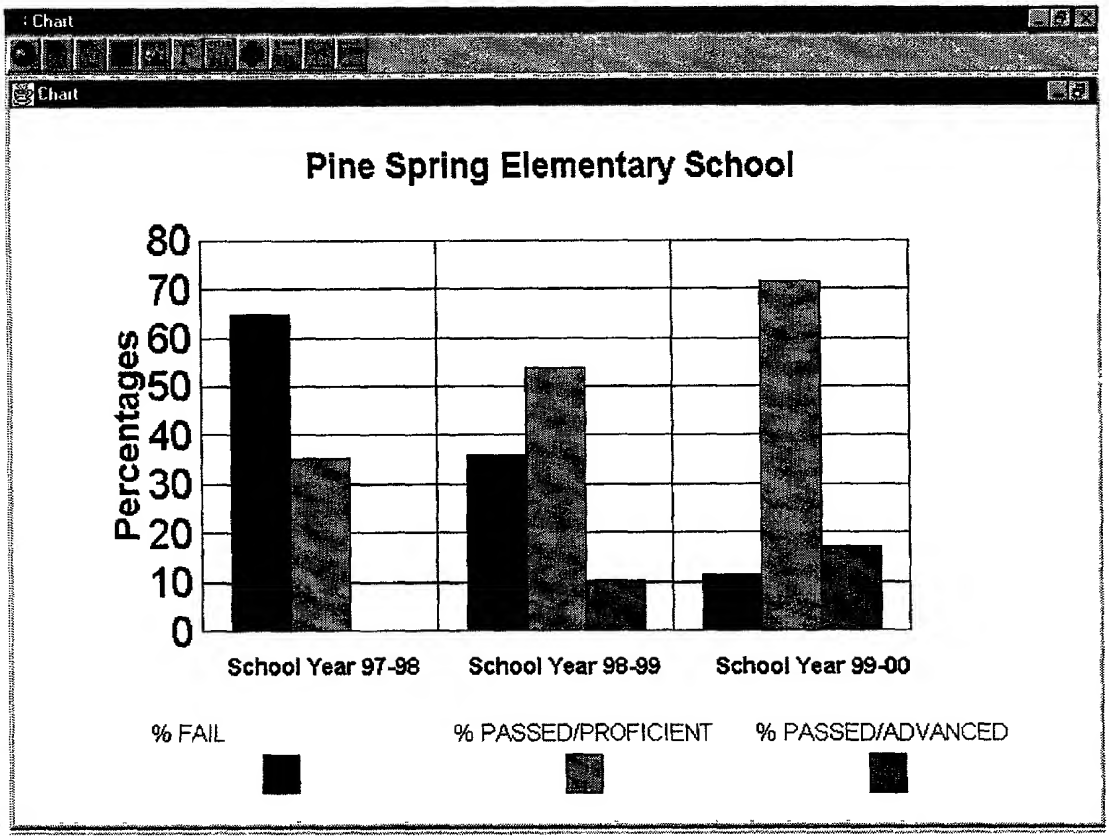


Chart
Chart
Pine Spring Elementary School
Percentages
80
70
60
50
40
30
20
10
0
School Year 97-98
School Year 98-99
School Year 99-00
% FAIL
% PASSED/PROFICIENT
% PASSED/ADVANCED

Fig. 13

Fig. 14

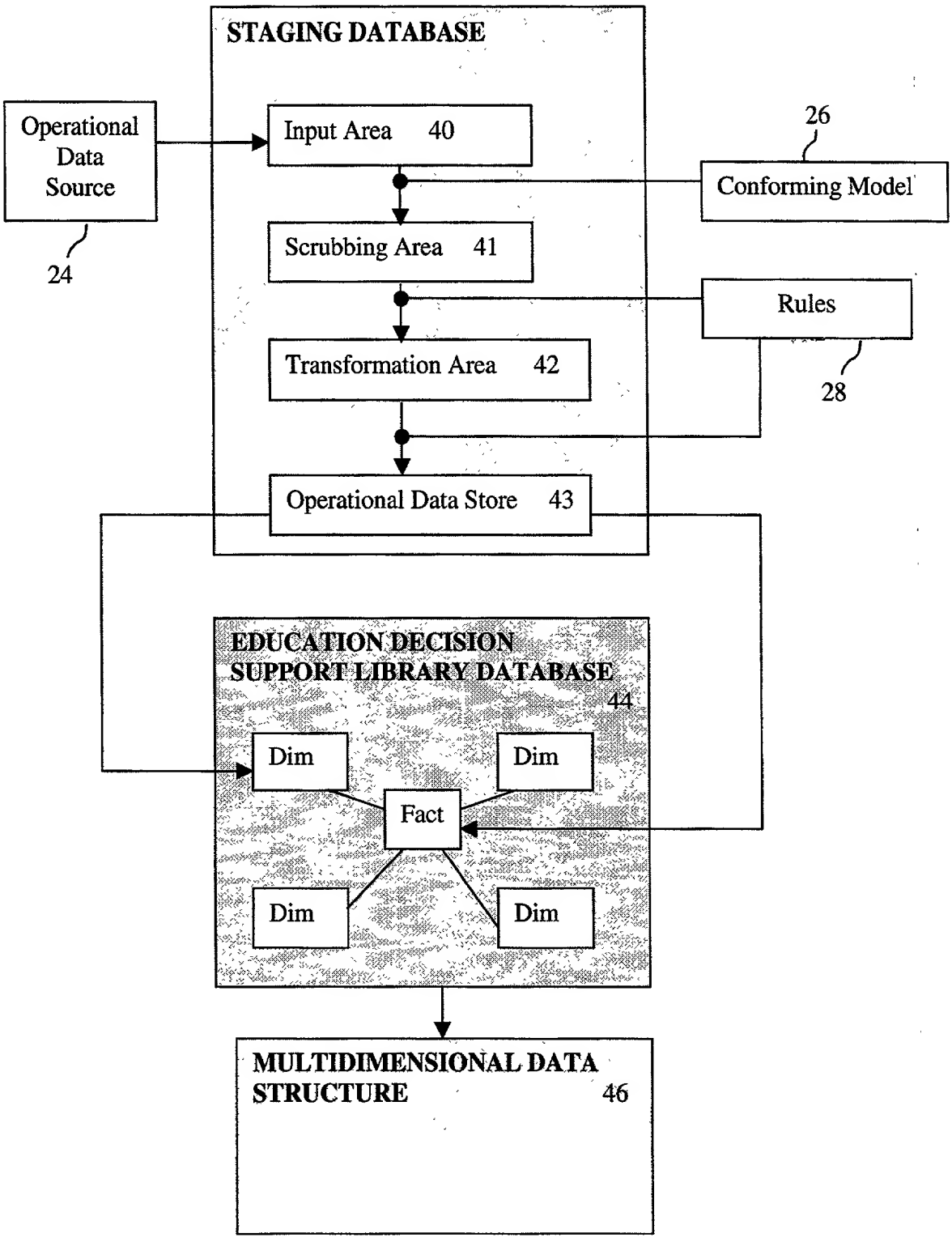
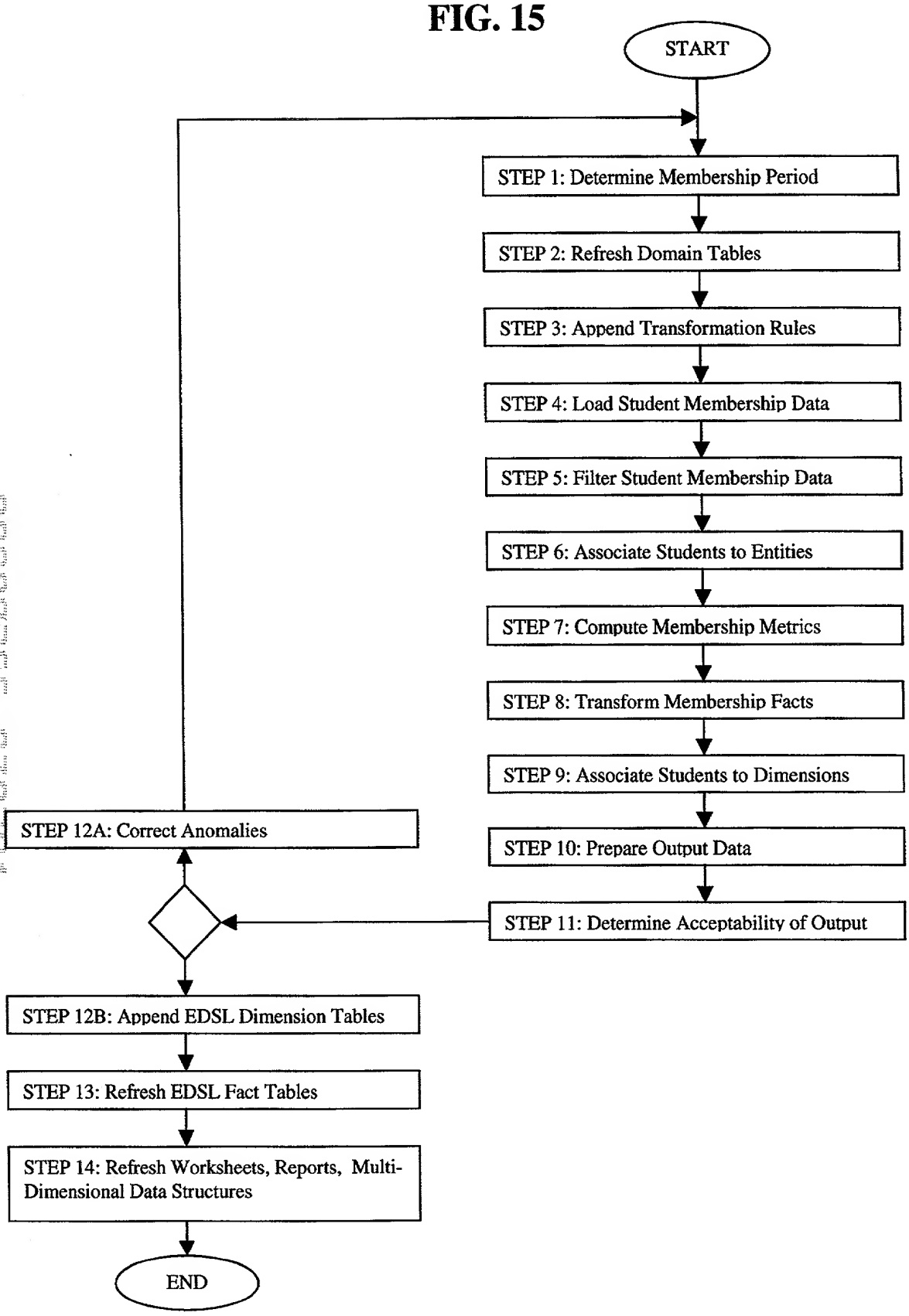

STAGING DATABASE
Operational Data Source
24
Input Area 40
Scrubbing Area 41
Transformation Area 42
Operational Data Store 43
26
Conforming Model
Rules
28
EDUCATION DECISION SUPPORT LIBRARY DATABASE
44
Dim
Dim
Fact
Dim
Dim
MULTIDIMENSIONAL DATA STRUCTURE
46

FIG. 15


START
STEP 1: Determine Membership Period
STEP 2: Refresh Domain Tables
STEP 3: Append Transformation Rules
STEP 4: Load Student Membership Data
STEP 5: Filter Student Membership Data
STEP 6: Associate Students to Entities
STEP 7: Compute Membership Metrics
STEP 8: Transform Membership Facts
STEP 9: Associate Students to Dimensions
STEP 10: Prepare Output Data
STEP 11: Determine Acceptability of Output
STEP 12A: Correct Anomalies
STEP 12B: Append EDSL Dimension Tables
STEP 13: Refresh EDSL Fact Tables
STEP 14: Refresh Worksheets, Reports, Multi-Dimensional Data Structures
END